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STATEMENT OF WORK FOR OPERABLE UNIT 7 PRESENT LANDFILL (IHSS 114) AND INACTIVE HAZARDOUS WASTE STORAGE AREA (IHSS 203)

PREPARED BY
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ENVIRONMENTAL RESTORATION MANAGEMENT
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Approved RPM ~~Manager~~ Director [signature] Date 2/8/94

Approved QA [signature] Date 2/8/94

1.0 Objective

The objective of this statement of work (SOW) is to integrate existing activities for Operable Unit 7 (OU 7), Present Landfill with revised scope resulting from current negotiations between DOE-RFO, the Colorado Department of Health (CDH) and the Environmental Protection Agency, Region VIII (EPA). Work conducted under this SOW supports EG&G Rocky Flats' efforts to implement the Rocky Flats Interagency Agreement (IAG).

2.0 Scope

The scope of this addendum is to identify and implement new scope for Operable Unit 7 (OU 7), Present Landfill. The tasks detailed below have been identified as a result of new guidance from the agencies and DOE stemming from direct negotiations for this OU. This effort involves the modification of the Phase I RFI/RI Field Sampling Plan, implementation of the revised field sampling plan, development of the Interim Measure/Interim Remedial Action (IM/IRA) Decision Document, and remedial design. These modifications are a result of an integration of Phase I and Phase II pathways identified in the conceptual model detailed in Technical Memorandum 1, Exposure Scenarios for OU 7 and current re-scoping activities being conducted with the agencies. New tasks include modification and implementation of pertinent sections of the Phase I RFI/RI Work Plan as well as IM/IRA development and design. All tasks have been discussed with DOE/RFO as well as the technical oversight representatives from the Agencies. Tasks originally supporting the development of a Phase I RFI/RI Report will now support the development of an Interim Measure/Interim Remedial Action Decision Document (IM/IRA DD).

3.0 Applicable Document Guidance

The subcontractor shall utilize, but not be limited to, the following regulatory documents and any references cited therein while implementing this SOW :

Rocky Flats Interagency Agreement, January 22, 1991

EG&G, Rocky Flats, Inc., Final Phase I RFI/RI Work Plan for OU7, Present Landfill, December, 1992

EG&G, Rocky Flats, Inc. ,Proposed Interim Measure/Interim Remedial Action Decision Document for the Solar Evaporator Ponds Operating Unit No. 4., April 1992

EG&G, Rocky Flats, Inc., Annual Report: Sitewide Treatability Studies, March 1992

EG&G, Rocky Flats, Inc. , Historical Release Report for the Rocky Flats Plant, June 1992

EG&G, Rocky Flats, Inc., Background Geochemical Characterization Report, September 1993

US Department of Energy, Rocky Flats Plant, Draft Integration of NEPA, CERCLA, and RCRA for Activities Under the Interagency Agreement at Rocky Flats Plant, June 1992

US EPA, Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, EPA 540 G-89-004, October 1988

US EPA, Data Quality Objectives for Remedial Response Activities, Development Process, March 1987

US EPA, Data Quality Objectives for Remedial Response Activities, Example Scenario, March 1987

US EPA, Guidance for Data Usability in Risk Assessment, October 1990

US EPA, Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, (Part A), Interim Final, EPA 540/1-89/002, December 1989

US EPA, Risk Assessment Guidance for Superfund, Volume II, Environmental Evaluation Manual, Interim Final, EPA/540/1-89/001, March 1989

US EPA, Ecological Assessments of Hazardous Waste Sites: A field and Laboratory Reference, EPA/600/3-89/013, March 1989

US EPA, Guideline for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, EPA/540/2-058, December 1989

Code of Federal Regulations, Title 40, Part 265 - Interim Status Standard for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, July 1990

Code of Federal Regulations, Title 43, Part 11 - Natural Resource Damage Assessments, October 1987 (or latest edition)

Phase I RFI/RI Work Plan For Operable Unit 7 Present Landfill IHSS 114 and Inactive Hazardous Waste Storage Area IHSS 203, December 1991 (Including Draft Technical Memoranda for OU 7)

4.0 TASKS

Task 4.1 Finalize OU 7 Phase I RFI/RI Work Plan Modification

The subcontractor shall finalize this technical memorandum per DOE HQ and DOE-RFO as well as EPA/CDH comments on the draft The Phase I RFI/RI Work Plan which was modified to reflect the following:

.Changes to Section 7, Field Sampling Plan (FSP), to reflect additional field activities necessary to support agency approved revised DQO's.

.Changes to the DQO section of the work plan as modified as a result of Task 4.1.

.Modifications to any other section of the work plan such as QA/QC, PARCC, HHRA, EE as necessary to support the revised DQO's.

. Data evaluation of Phase I RFI/RI data to support the proposed scope of the tech memo.

The format of this revision shall be via technical memorandum and as such will require at least two review and revision cycles as well as agency and DOE briefing meetings. The final proposed scope shall be developed per guidance from negotiations between EG&G and DOE and the regulatory agencies, be reviewed by EG&G and DOE technical staff, and approved by the EG&G project manager and all IAG signatories.

Task 4.2 Revised Field Sampling Plan Implementation

Upon approval by DOE, CDH, and EPA of the revised field sampling plan, the field operations shall be implemented to achieve the agency approved DQO's. Operations shall be conducted in accordance with applicable EG&G Standard Operating Procedures (SOP's) including but not limited to all ER field, quality, and administrative SOP's. For the purpose of this request for proposal, all field cost and resource estimates shall be broken down into the following major categories:

- Drilling, including monitor well installation and soil borings
- Soil and Sediment sampling
- Groundwater sampling
- Surface water sampling

The subcontractor shall perform the RFI/RI Investigation field work in accordance with the Work Plan Implementation Plan, the Revised Field Sampling Plan, pertinent sections from the Original Work Plan, the IAG, this SOW, and supporting procedures.

All schedules, cost breakdowns, and task reports shall be developed on a task by task basis. The attached work breakdown structure provides guidance as to how the baseline schedule and costs shall be detailed for any proposal, status reports, and other documentation associated with this project.

Task 4.3 Baseline Risk Assessment

The Baseline Risk Assessment shall be completed in accordance with the most current agreements negotiated between IAG signatories for program level methodologies (background comparisons and data aggregation) as well as OU 7 specific guidance . The three areas to be evaluated for the BRA shall be divide as follows:

4.3.1. Present Landfill
4.3.2. East Landfill Pond sediment and surrounding soils.
4.3.3. OU 7 groundwater.

The subcontractor shall also comply with up-to-date regulatory guidance for risk assessment at RFP. The BRA is divided into a Human Health and Risk Assessment (HHRA) and an Environmental Evaluation (EE). This task, as a minimum, shall conform with specifications for BRA deliverables defined in the Federal Facility Agreement Statement of Work, Attachment 2, Sections VII.D.1 and VIII of the IAG.

Guidelines for Performing the BRA

The BRA must satisfy two major and potentially competing criteria.

The subcontractor shall assist EG&G in developing a realistic risk assessment that reflects this concept of risk assessment and risk management. In general, this will require critical interpretive rationale and creative thinking. Subcontractors schooled in EPA-stylized thinking processes will have to demonstrate their ability for creative scientific thought first, followed by Agency guidance rationale.

First, the BRA shall reflect current guidance provided by the EPA for two main reasons: (1) the NCP requires that requirement, and (2) it is unlikely that the

agency will accept a BRA that does not meet the minimum requirements of the NCP as well as any region-specific guidance. Agency guidance, if followed closely, will result in a biased assessment owing to the tendency to introduce conservative bias through "errs on the side of safety". The subcontractor shall provide a product that can be audited by the agency reviewers against agency BRA requirements.

Second, the BRA shall provide a critical assessment of risk so that the risk management decision maker can obtain a complete view of the site related risk, including but not limited to an analysis of the uncertainties, biases, and limitations of the risk assessment. This is necessary to ensure that the decision maker is presented a balanced perspective from which to base responsible risk management decisions.

The basis for delineating these two requirements stems from guidance provided by the National Academy of Sciences (NAS) which strongly recommends segregating "risk assessments" from "risk management". NAS views risk assessment as characterization of the potential adverse effects of human exposure to environmental hazard including a characterization of the uncertainties inherent in the process. Risk management, according to NAS, is a decision-making process that entails consideration of political, social, economic, and engineering information with risk assessment information to develop, analyze, and compare regulatory options and to select the appropriate response. Agency risk assessment guidance violates this segregation principle by introducing a conservative bias into the analysis through applying "errs on the side of safety" to bridge uncertainty gaps. "Errs on the side of safety" constitute practicing risk management at the risk assessment stage.

Conceptually, these competing objectives require that the risk assessment be conducted initially with an unbiased perspective. After the unbiased assessment and uncertainty analysis are performed, the agency-oriented approach is applied through construction of the Reasonable Maximum Exposure (RME) scenario.

In reality, this is not a two-step process; rather, it is done in a combined method mode by performing parallel computations.

The subcontractor may refer to documents in Table 1 in implementing the work outlined for the Public Health BRA. Table I may not be all inclusive with regard to BRA reference documents.

Technical Requirements for HHRA

The HHRA shall be structured according to all of the following five major tasks:

1) Data evaluation and identification of compounds of concern. This task shall include an assessment of data usability, summary of the nature and extent of contamination with respect to source and soils as defined in the IAG, and identification of compounds of concern that are to be evaluated in the BRA. The COC/Data Evaluation Template shall be used for this task.

2) Exposure assessment. This task is normally the most involved and demanding of quantitative techniques in the BRA. Exposure assessment

shall include: identification and evaluation of exposed and potentially exposed populations, analysis of exposure pathway contributions, development of current and future-use exposure scenarios, assessment of exposure factors, and assessment of appropriate exposure point concentrations for both current and future-use exposure scenarios. Contaminant transport and fate modeling is performed under this task.

3) Toxicity assessment. The toxicity assessment involves identification of appropriate toxicity benchmarks to be applied in the BRA. Normally, this task consists of a literature review and development of a brief synopsis of the appropriate toxicity information for the compounds of concern. Occasionally, toxicity benchmarks are developed or modified using information obtained from the literature.

4) Risk characterization. Risk characterization integrates the exposure and toxicity assessments under the various exposure scenarios.

5) Uncertainty analysis. The objective of this task is to evaluate the reliability of the BRA as a scientifically credible document. An uncertainty analysis shall be performed to characterize and quantify, to the extent practicable, sources and magnitude of uncertainty in the BRA. Quantitative techniques may include: sensitivity analysis, first-order analysis to evaluate the propagation of errors, or numerical methods such as stratified Monte Carlo sampling.

The BRA shall be presented as a stand-alone section of the RFI/RI report. All supporting figures, tables and references shall be contained in the BRA Supporting appendices shall be included in the RFI/RI appendix.

Environmental Evaluation (EE)

An environmental evaluation will be completed for this project. This EE was funded in FY 93 and was incorporated with OU 6. This task was scheduled for completion in FY 93 and no funding for this shall be included in this proposal. The subcontractor shall incorporate the findings of this EE into the BRA.

Task 4.4 Project Management

The subcontractor shall be responsible for all aspects of project management and control for subcontractor personnel. Reporting requirements delineated in this document shall be the basis for project control of cost and schedule. Budget status reports shall be completed monthly by the subcontractor and submitted to CTR by the fifteenth day of each month for the proceeding month's activity. This report shall include

earned value statements that will detail the following:

- Budgeted Cost of Work Performed (BCWP)
- Actual Cost of Work Performed (ACWP)
- Budgeted Cost of Work Scheduled (BCWS)

All tasks shall be reported monthly in terms of earned value as required in the original scope of work. New tasks shall be included in a revised work breakdown structure for this subcontract and submitted to the EG&G project manager for review and approval. All costs and reporting shall be done in accordance with the format in Attachment 1. Earned value shall be calculated and reported monthly for every task.These calculations shall be performed at the task level and rolled up to the project level.

The subcontractor shall also be responsible for attending performance meetings with EG&G project team members and/or regulatory agency personnel. Meetings include but may not be limited to bi-weekly meetings with EG&G project management and bi-monthly meetings with EG&G, DOE, and regulatory agency personnel. Typical meetings should not exceed 4 hours in length but may run longer.

The subcontractor shall be responsible for participating in meetings concerning logistical coordination. The subcontractor shall prepare meeting minutes to document all meetings with EG&G project team members and regulatory agency personnel. The typed meeting minutes are due to the CTR within one week of the meeting date. Meeting minutes shall be reviewed and approved by the CTR prior to submission to the project file. The meeting minutes shall be typed in Word Perfect for the Macintosh. Both a hard copy and an electronic copy (3 1/2 " disk) of meeting minutes shall be submitted to the CTR. Project management meetings other than these detailed may be required. Meetings and attendees shall be approved by the CTR.

Task 4.5 Miscellaneous Tasks

4.5.1 Field Deficiency Resolution

The subcontractor's participation in field management review meetings shall include preparing written responses/corrections of field work deficiencies as determined by regulatory agencies and EG&G and DOE QA/QC audit findings or

deficiencies. A schedule for resolving field deficiencies during all aspects of the field programs will be decided upon with the subcontractor immediately following the recognition of the deficiency.

4.5.2 Data Management & Quality

The subcontractor shall attend a briefing to be given by EG&G's Sample Management Organization before sampling activities begin and a briefing before data use and extraction. In accordance with Section 19 of the QAPjP manual, all software used for data management and report generation must be approved by the Sample Management Organization prior to use.

4.5.3 Data Compatibility

The subcontractor shall provide mapping capabilities and/or support to utilize ESRI's ARC/Info Geographic Information Systems (GIS) software to manage all spatially referenced data. Initial Rocky Flats Plant base coverage will be supplied to the subcontractor by EG&G. The subcontractor shall also provide technical experience in using the ARC/Info software for map generation and spatial modelling and exchange digital data with EG&G as defined:

1. All spatial data will have an XY coordinate projection of True State Plane in the Colorado, Central zone with the NAD27 datum.

2. Format of data will be an ARC/Info export file for a UNIX operating system.

The subcontractor shall demonstrate proficiency in the management of sample gathering and data transmission, especially in the areas of accurate utilization and timely transmission of DataCap records to the Rocky Flats Environmental Database System (RFEDS).

4.5.4 Environmental Quality Assurance Briefing

All subcontractor personnel working on tasks described in this SOW shall attend a Quality Assurance briefing to be given by EG&G's Environmental Quality Assurance department.

Interim Measure/Interim Remedial Action (IM/IRA) Process.

The following is a general description of the work required for the IM/IRA process. It is intended for informational purposes. Detailed task descriptions follow.

1) Regulatory Support;

2) Applicable Relevant and Appropriate Requirements (ARARs) Development;

3) Modeling Support;

4) Conceptual Design;

5) Data Evaluation (RFI/RI, Historical, OU-6 etc.);

6) IM Environmental Assessment (Draft and Final Reports);

7) Options Analysis - Sludge Remediation;

8) Technology Literature Research.

9) Draft IM/IRA Decision Document

10) IM/IRA Decision Document Public Responsiveness Summary;

11) Final IM/IRA Decision Document

12) IM/IRA Work Plan

13) Phase I IM/IRA Implementation Document (Title II);

14) Final Title II Design with Construction Schedule;

The subcontractor shall be required to support the IM/IRA Program as referenced. The overall objective of this scope of work shall be to close the OU 7 in accordance with the IAG/Colorado Hazardous Waste Act regulations as supported by EPA guidance on "Presumptive Remedies".

Task 4.6 IM/IRA Decision Document

The subcontractor shall prepare an Interim Measure/Interim Remedial Action (IM/IRA) Decision Document in accordance with the terms and conditions of the Rocky Flats Plant (RFP) Interagency Agreement (IAG) signed by the U.S. Department of Energy (DOE), U.S. Environmental Protection Agency (EPA), and the Colorado Department of Health (CDH) on January 22, 1991. The draft proposed Phase I IM/IRA Decision Document shall be prepared in accordance with paragraphs 15 and 150 of the RFP IAG, and consistent with guidance for implementing interim actions under remedial authority provided in the preamble to the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 55FR 8704 , March 8, 1990 and the Colorado Hazardous Waste Act (CHWA) Closure requirements. The draft proposed Phase I IM/IRA Decision Document shall provide the information required to recommend an alternative consistent with the CDH closure regulations.

The draft Phase I IM/IRA Decision Document shall address all hazardous substance source areas with risk levels greater than 10-6 evaluated at the source. The IM/IRA DD and/or OU7 Baseline Risk Assessment (BRA) shall define the source areas exhibiting a risk level of 10-6. The proposed IM/IRA Decision Document shall be a concise document that: (1) indicates the objectives of the IM/IRA (Remediation of source and soils); (2) discusses alternatives, if any, that were considered; (3) provides the rationale for the alternative selected; (4) presents EPA/CDH approved Applicable, Relevant and Appropriate Requirement (ARAR) and; (5)

discusses how the interim remedy selected will be consistent with the final remedy.

The subcontractor shall be required to incorporate all EG&G, DOE, EPA, and CDH comments into the draft final proposed IM/IRA Decision Document and generate a comment responsiveness summary.

4.6.1 Regulatory Support

The subcontractor shall be required to provide regulatory support relative to the IM/IRA process. In general, an emphasis shall be placed on RCRA, CERCLA, Land Disposal Regulations (LDRs), CHWA and DOE Orders. Regulatory analysis shall be required for all options evaluated.

4.6.2 Action Specific Applicable Relevant and Appropriate Requirements (ARARs) Development

The subcontractor shall be required to prepare an EPA approved ARAR analysis in support of the IM/IRA Decision Document in accordance with the IAG. The ARARs developed shall augment the agency approved location and chemical specific ARARs and shall also require agency approval.

4.6.3 Modeling Support

The subcontractor shall be required to provide, as appropriate numerical or analytical modeling support. For example, in the event a migration barrier is selected for the preferred alternative, the subcontractor shall be required to apply the EPA approved, "Hydrologic Evaluation Landfill Performance" (HELP) model, or comparable/equivalent model.

4.6.4 Conceptual Design

The subcontractor shall be required to prepare a conceptual design in support of the preferred alternative selected in the IM/IRA Decision Document. The conceptual design shall be sufficient for supporting the Title I Design.

4.6.5 Data Evaluation

The subcontractor shall be required to evaluate all historical and Phase I data for OU 7, new data collected, and any other existing data applicable to supporting the IM/IRA process. At a minimum, the subcontractor shall be required to utilize the OU7 Phase I RFI/RI, historical, pond characterization, and relevant OU 6 data or other previous investigations data to evaluate/select a remedial technology for closure of the Present Landfill.

4.6.6 Environmental Assessment (EA)

The subcontractor shall perform a National Environmental Policy Act (NEPA), Environmental Assessment (EA) that shall be integrated into the IM/IRA Decision

Document. Guidance for performing the EA shall be taken from the integration of NEPA, CERCLA, and RCRA for activities under the Interagency Agreement at Rocky Flats Plant".

4.6.8 Options Analysis

The subcontractor shall be required to support an "Options Analysis" for landfill and pond closure. The options analysis shall take all potentially appropriate remedial alternatives into consideration. The options analysis shall support the IM/IRA Decision Document, as appropriate. Options analysis shall take into account CHWA closure requirements and EPA guidance on "presumptive remedies".

4.6.8 Prepare Draft IM/IRA Decision Document

The subcontractor shall integrate the above sections into a draft IM/IRA Decision Document in accordance with Section I.B.10 of Attachment 2 of the IAG. This document shall incorporate all new guidance approved by EPA/CDH/DOE/EG&G as a result of re-scoping negotiations. This section shall include a conceptual design (Title I) for closure of OU 7. Draft and final versions will be required.

4.6.9 Public Comment Period Responsiveness Summary

Subsequent to the IM/IRA Decision Document being revised in accordance with the above referenced agencies comments, the CDH/EPA shall open a public comment period for the proposed IM/IRA Decision Document to satisfy the required public comment period of 60 days.

Subsequent to the public comment period for the IM/IRA Decision Document, the subcontractor shall develop a IM/IRA Responsiveness Summary in accordance with the RFP IAG and EG&G, DOE, EPA, and CDH. After receipt of EG&G, DOE, EPA, CDH and the publics comment concerning the proposed IM/IRA Decision Document, the subcontractor shall submit a Final IM/IRA Decision Document and Responsiveness Summary for EG&G, DOE, EPA and CDH review and approval in accordance with paragraph 150 of the RFP IAG.

The subcontractor shall be required to support the public comment period associated with the IM/IRA Decision Document. This shall include, but may not be limited to, development of slides/overheads, attending public meetings and addressing questions, preparing narrative description of the selected remedy, etc. In addition, the subcontractor shall be required to prepare a "IM/IRA Decision Document Public Responsiveness Summary" in accordance with the RFP IAG. The responsiveness summary shall become an integrated component of the IM/IRA Decision Document. Draft and final versions will be required.

Task 4.7 IM/IRA Remedial Design

The subcontractor shall be required to prepare an IM Implementation Document in accordance

with the RFP IAG. In general, the IM Design Work Plan shall consist of "Title I Design" with Title II schedule. The IM Design Work Plan shall be developed based on the conceptual design criteria from the OU7 IM/IRA Decision Document. The IM Design Work Plan shall be developed in accordance with Section I.B.10 of Attachment 2 to the IAG.

4.7.1 IM/IRA Design Work Plan

The subcontractor shall prepare an IM/IRA Design Work /plan which shall include Title II design schedules. The work plan shall be similar in nature to the Phase I RFI/RI Work Plan Implementation Plan and shall detail implementation of the selected IM/IRA.

4.7.2 Phase I IM/IRA Implementation Document (Title II Design)

The subcontractor shall be required to develop a Phase I IM/IRA Implementation Document (Title II) in accordance with the RFP IAG. The Phase I IM/IRA Implementation Document/Title II Design shall reflect appropriate percent complete (85% - 95%). The Title II Design Document shall be prepared by a registered engineer. Draft and final versions will be required.

4.7.3 Final Title II Design with Construction Schedule

The subcontractor shall be required to revise the Phase I IM/IRA Implementation Document/Title II Design in accordance with EPA/CDH comments and prepare a construction schedule. This document shall be prepared in accordance with the RFP IAG. The Final Title II Design Document shall reflect appropriate percent completion (95%). The construction schedule shall be developed in accordance with the IAG schedule. Draft and final versions will be required.

5.0 Deliverables

All deliverables shall be submitted with 20 copies unless otherwise specified. All deliverables shall be submitted in accordance with Table 6 of the IAG, if applicable. In order to complete DOE/EG&G internal review all draft documents shall be submitted 60 days prior to Table 6 requirements for the following:

IM/IRA Proposed Decision Document (Draft and final)
IM/IRA Work Plan (Draft and final)
Final IM/IRA Proposed Decision Document (Draft and final)
IM/IRA Responsiveness Summary (Draft and final)

Assume all Table 6 documents shall undergo one DOE/EG&G review and two CDH/EPA reviews responsiveness summaries for all comments shall be submitted to EG&G 15 working days after receipt of comments. Responsiveness summaries shall be submitted to in lieu of revised drafts to DOE and CDH/EPA.

Additional documents required are:

Final Agency approved Technical Memorandum, Revised Field Sampling Plan For OU 7, Present Landfill Due 1-June-94

The subcontractor shall submit with the proposal a detailed schedule detailing all deliverables including draft and final versions, broken down to the task level as detailed in the attached work breakdown structure.

6.0 QUALITY ASSURANCE REQUIREMENTS

Work performed under this SOW is governed by the EG&G Environmental Restoration(ER) Quality Assurance Project Plan (QAPjP). The ER QAPjP complies with the requirements of EPA QAMS-005/80 and DOE Order 5700.6C which addresses ASME NQA-1. The subcontractor shall comply with the following specific Quality Assurance (QA) requirements prior to the initiation of work, as appropriate:

6.1 Quality Assurance Addendum Revision

After review of the draft work plan revision, EG&G ER shall revise the OU 7 Phase I Quality Assurance Addendum that shall be submitted as part of the final work plan.

6.2 Organization

The authority and responsibilities of persons or organizations performing work under this statement of work shall be established, documented and submitted to EG&G ER. An organization chart identifying specific individuals by name, supported by itemized authorities and responsibilities is a suitable means of documentation.

6.3 Personnel Qualification

Personnel performing technical work shall receive training and indoctrination in accordance with 3-21000-ADM-2.02 to applicable procedures to assure proper understanding of the QA and technical requirements of this SOW before beginning work. In addition, written personnel qualification requirements shall be established for all positions performing technical work. Documented evidence of personnel training, training material content, personnel qualification requirements, and the qualification of personnel who meet the personnel qualification requirements shall be maintained and made available to EG&G for review upon request. EG&G will provide training for Quality Assurance and technical procedures furnished by EG&G.

Specific training shall include instruction to conform with EG&G health and safety, hazardous waste management and radiation worker requirements, as applicable.

6.4 Design

Activities involving the performance of technical design related activities, specifically, but not limited to, calculations used in developing data and calculations incorporated into reports, shall be reviewed, verified and documented. Calculations shall be performed in accordance with EG&G procedure number 3-21000-ADM-03.01.

6.5 Instructions, Procedures, and Drawings

All work shall be performed to EG&G ER approved and controlled procedures except where excluded in writing by EG&G.

6.6 Document Control

The subcontractor shall acknowledge receipt of and manage EG&G plans and procedures in accordance with EG&G procedure number 3-21000-ADM-06.01.

6.7 Control of Purchased Items and Services

Items or services procured under this subcontract shall be performed in accordance with the requirements of the QAPjP.

6.8 Identification and Control of Items

When applicable, the subcontractor shall prepare written procedures that ensure that only correct and accepted items are used or installed and that they are traceable through unique identifiers. The procedures shall be submitted to EG&G for approval 10 working days after notification of the requirement.

6.9 Inspection

Quality affecting activities are subject to inspection by EG&G. These inspections will be performed in accordance with EG&G procedure number 3-21000-ADM-10.01.

6.10 Control of Measuring and Test Equipment

Activities in which personnel use measuring and test equipment shall be controlled in accordance with EG&G procedure number 3-21000-ADM-12.01. Such devices shall be controlled, calibrated, and adjusted at predetermined intervals (established by the subcontractor and approved by EG&G) to maintain accuracy.

6.11 Handling, Storage, and Shipping

Activities in which personnel handle, store, package, ship, or receive items which if damaged, lost, or deteriorated would be detrimental to the work performed by the subcontractor or those activities in which personnel handle, store, package, or ship hazardous material shall be controlled by written procedures. The procedures shall be submitted to EG&G for approval 10 working days after notification of the requirement.

6.12 Control of Nonconforming Items

Activities regarding the identification and disposition of nonconforming items shall be performed in accordance with EG&G procedure number 3-21000-ADM-15.01. The control of nonconforming items shall apply to all activities that involve the handling of all items, including samples, data, raw materials, hardware, and software.

6.13 Corrective Actions

Activities that identify, rectify and preclude recurrence of conditions adverse to quality shall be conducted in accordance with EG&G procedure number 3-21000-ADM-16.01.

6.14 Software Quality Assurance

The development and use of both administrative and scientific computer software which have a potential to affect quality shall be performed in accordance with written procedures prepared by the subcontractor and submitted for approval by EG&G 10 working days after notification of the requirement.

6.15 Accessibility

The subcontractor's work place and working records shall be accessible during normal working hours for verification or audit by EG&G or their representatives, during the performance of this subcontract. All completed records shall become the property of EG&G and shall be turned over to EG&G no later than sixty (60) days following the completion of the technical work.

6.16 Miscellaneous

The subcontractor shall perform all work in accordance with EG&G Quality Assurance program requirements. All work shall be performed under the cognizance of the responsible EG&G organization and in accordance with approved EG&G implementing procedures, or subcontractor procedures which have been approved by the responsible EG&G organization prior to the start of any work. The responsible EG&G organization shall review and approval all work in accordance with applicable implementing procedures.

The subcontractor shall not be permitted to:

- Provide any safety-related items without prior inspection and acceptance by EG&G Quality Assurance organization.
- Perform any special processes such as welding, NDE, heat treatment, plating, etc., for which acceptance is based on supplier-furnished personnel qualifications or other quality assurance criteria.
- Perform inspections or tests of equipment or components for the purpose of determining final acceptance by EG&G, except for those inspections and tests conducted in accordance with approved EG&G implementing procedures or supplier procedures which have been approved by EG&G. All such inspections and tests shall be performed using measuring and test equipment verified and authorized by the Rocky Flats Metrology Lab. All work shall be performed under the direct supervision of EG&G, and witnessed by qualified EG&G personnel."

7.0 Security Requirements

None.